

AMENDMENTS TO THE CLAIMS

Claims 1-24 are pending in this application.

Please cancel claims 20-24 without prejudice.

1 1. (Original) A method for etching a tapered trench in a layer of material, said layer
2 of material having a mask adjacent a surface thereof which has an opening therein defining a
3 location on the layer of material at which the trench is to be formed, said method comprising:
4 a. performing a vertical etch process step on said layer of material;
5 b. enlarging the opening in said mask; and
6 c. repeating steps a and b above in an alternating manner until a trench has
7 been etched to a desired depth.

1 2. (Original) The method according to Claim 1, wherein said mask comprises a
2 resist layer, and wherein said enlarging step comprises performing a resist etch process step to
3 enlarge the opening in said resist layer.

1 3. (Original) The method according to Claim 2, wherein the resist layer is tapered
2 around a periphery of said opening to facilitate the resist etch process step.

1 4. (Original) The method according to Claim 2, wherein said vertical etch process
2 steps and said resist etch process steps are performed in a multi step process.

1 5. (Original) The method according to Claim 2, wherein said vertical etch process
2 steps and said resist etch process steps are performed in a pulsed etch process.

1 6. (Original) The method according to Claim 1, wherein said trench has a depth of
2 from about 10um to about 100um.

1 7. (Original) The method according to Claim 6, wherein said trench has sidewalls
2 tapered at a slope of from about 45 degrees to about 80 degrees.

1 8. (Original) The method according to Claim 1, wherein said layer of material
2 comprises a semiconductor substrate.

1 9. (Original) The method according to Claim 8, wherein said semiconductor
2 substrate comprises a silicon substrate.

1 10. (Original) The method according to Claim 1, and further including the step of
2 performing a metal deposition step in said trench when said trench has been etched to a desired
3 depth.

1 11. (Original) The method according to Claim 1, wherein said method is
2 incorporated into a process for fabricating a MEMS device.

1 12. (Original) The method according to Claim 1, wherein said method is
2 incorporated in a process for fabricating a high power RF device including a LDMOS and a
3 VDMOS device.

1 13. (Original) The method according to Claim 1, wherein said method is
2 incorporated in a process for fabricating a Z-axis accelerometer.

1 14. (Original) The method according to Claim 1, including the steps of
2 independently controlling one or more of pressure, power, gas flows and time duration during
3 the vertical etch process steps.

1 15. (Original) A method for etching a tapered trench extending into a substrate from
2 a surface thereof, said method comprising:
3 a. providing a mask adjacent said surface, said mask having an opening
4 defining a location on said substrate at which said trench is to be etched;
5 b. performing a first vertical etch process step to form a first trench portion
6 at said location;
7 c. performing a first opening enlarging step for enlarging the opening in said
8 mask;
9 d. performing a second vertical etch process step to form a second trench
10 portion;
11 e. performing a second opening enlarging step for further enlarging the
12 opening in said mask; and
13 f. continuing to perform vertical etch process steps and opening enlarging
14 process steps in an alternating manner until said trench is of a desired depth.

1 16. (Original) The method according to Claim 15, wherein said mask comprises a
2 resist layer, and wherein said opening enlarging steps comprise performing resist etch process
3 steps to enlarge the opening in said resist layer.

1 17. (Original) The method according to Claim 16, and further including the step of
2 tapering said resist layer around a periphery of said opening prior to performing the first vertical
3 etch process step to facilitate performing the resist etch process steps.

1 18. (Original) The method according to Claim 15, wherein said trench has a depth of
2 from about 10um or less to about 100um or more.

1 19. (Original) The method according to Claim 18, wherein sidewalls of said trench
2 have a slope of from about 45 degrees to about 80 degrees.

1 20-24. (Canceled)